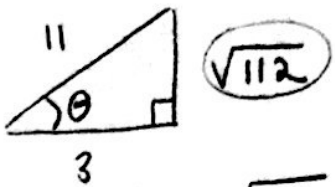
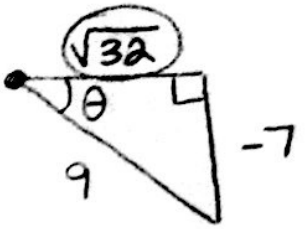
9) $\sin(\arccos \frac{3}{11})$



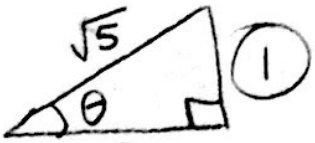
$\sin\theta = \frac{\sqrt{112}}{11}$ ✓

10) $\tan(\arcsin \frac{-7}{9})$



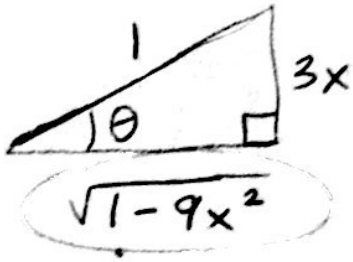
$\tan\theta = \frac{-7}{\sqrt{32}}$

11) $\tan(\text{arc sec} \frac{\sqrt{5}}{2})$



$\tan\theta = \frac{1}{2}$ ✓

12) $\cos(\arcsin \frac{3x}{1})$



$\cos\theta = \sqrt{1-9x^2}$

Derivatives:

⊛ $\frac{d}{dx}[\arcsin u] = \frac{1}{\sqrt{1-u^2}} \cdot u'$

* $\frac{d}{dx}[\arccos u] = \frac{1}{\sqrt{1-u^2}} \cdot -u'$

⊛ $\frac{d}{dx}[\arctan u] = \frac{1}{1+u^2} \cdot u'$

* $\frac{d}{dx}[\text{arc sec } u] = \frac{1}{|u|\sqrt{u^2-1}} \cdot u'$

$\frac{d}{dx}[\text{arc cot } u] = \frac{1}{1+u^2} \cdot -u'$

$\frac{d}{dx}[\text{arc csc } u] = \frac{1}{|u|\sqrt{u^2-1}} \cdot -u'$